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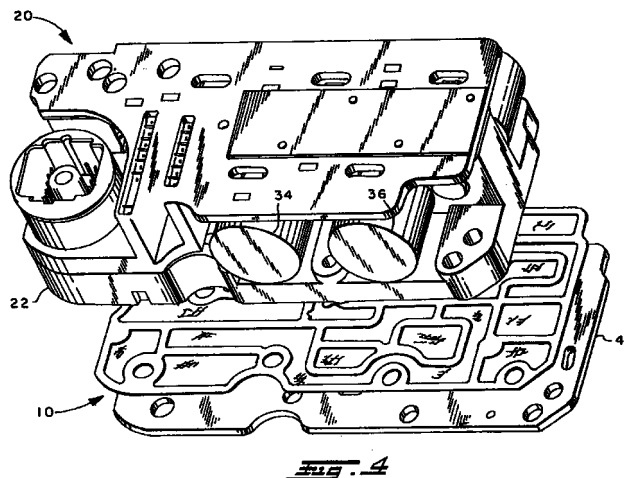
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(54) **Manifold and valve assembly and filter/gasket therefor**

(57) A filter/gasket (10) formed of woven screen material has a bead rim (14) formed of elastomeric material molded through the screen to form oppositely disposed bead portions (16,18) at a common location on the screen grid (12). A manifold set of servo actuated valves is ported on the manifold with the filter/gasket disposed for sealing between a separator plate and the manifold and filtering flow upon energization of any of the valves.



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EUROPEAN SEARCH REPORT

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EP 97 10 6137

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
A	DE 42 40 467 A (VOLKSWAGENWERK AG) 17 June 1993 * column 2, line 54-58; figure 4 * ---	1,6,9	F15B21/04 F15B13/00 F16K27/00
A	US 3 788 484 A (GODIN T) 29 January 1974 * column 2, line 52-58; figures 1,3 * ---	1,6,9	
A	DE 38 31 255 A (AISIN AW CO) 23 March 1989 * column 1, line 28-41; figure 4 * ---	9	
A	FR 2 398 245 A (OUTILLAGE AIR COMPRIME) 16 February 1979 * page 2, line 19-38; figures * ---	9	
A	US 5 314 616 A (SMITH LYLE B) 24 May 1994 * column 5, line 48-57; figures 4-8 * ---	1,6,9	
A	US 5 509 666 A (ABRAHAM DENNIS J ET AL) 23 April 1996 * column 5, line 3-13; figures 2-5 * -----	1,6	
			TECHNICAL FIELDS SEARCHED (Int.Cl.6)
			F16H B60T F15B F16K F16J B01D
The present search report has been drawn up for all claims			
Place of search BERLIN		Date of completion of the search 6 May 1999	Examiner Pöhl, A
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

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**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
DE 4240467 A	17-06-1993	FR 2685050 A	18-06-1993
US 3788484 A	29-01-1974	CA 984767 A	02-03-1976
		DE 2240827 A	01-03-1973
		FR 2150392 A	06-04-1973
		GB 1371127 A	23-10-1974
		JP 48035460 A	24-05-1973
DE 3831255 A	23-03-1989	JP 1074346 A	20-03-1989
		JP 2714381 B	16-02-1998
		US 4908255 A	13-03-1990
FR 2398245 A	16-02-1979	NONE	
US 5314616 A	24-05-1994	NONE	
US 5509666 A	23-04-1996	US 5456475 A	10-10-1995
		AU 623643 B	21-05-1992
		AU 3308589 A	02-11-1989
		CA 1315503 A	06-04-1993
		DE 3914213 A	09-11-1989
		FR 2635162 A	09-02-1990
		GB 2217625 A, B	01-11-1989
		JP 1316566 A	21-12-1989
		JP 2747602 B	06-05-1998
		MX 173937 B	11-04-1994
		SE 503810 C	09-09-1996
		SE 8901524 A	29-10-1989